



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,733	02/12/2004	Hsiang-An Hsieh	250324-1040	5601

24504 7590 08/21/2006

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA 30339-5948

EXAMINER

LEE, CHUN KUAN

ART UNIT	PAPER NUMBER
----------	--------------

2181

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/777,733	Applicant(s) HSIEH, HSIANG-AN	
	Examiner Chun-Kuan (Mike) Lee	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,8,12,16,17,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,8,12,16,17,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

8/17/2006

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-4, 7-8, 12, 16-17 and 20-21 have been considered but are moot in view of the new ground(s) of rejection. Objection to the Specification in the previous office action is withdrawn. Currently, claims 5-6, 9-11, 13-15 and 18-19 are canceled and claims 1-4, 7-8, 12, 16-17 and 20-21 are pending for examination.

2. In responding to applicant's arguments regarding independent claim 1 rejected under 35 U.S.C. 103(a) that Mowery fails to teach or suggest the claimed features of either two-system end-interfaces compatible with different interface standards, or a signal converter control chip between an USB interface and a storage media card interface and that the change in terminology (i.e. changing "two configuration connector" to "two-system end-interfaces") does not add any new matter to the application, as the language was clearly supported by the original specification and drawings, as stated in the 4th paragraph on page 16 to 1st paragraph on page 17. Applicant's arguments have fully been considered, but are found not to be persuasive.

Applicant's arguments appear unclear to the examiner, as applicant has not pointed out where the amendments in the claim 1 are supported, nor does there appear to be a written description of the claimed limitations "two-system end-interfaces," "a storage media interface" and "storage media card interface" in the application as filed.

More specifically, examiner is uncertain where exactly in the Specification and Drawings support the claimed limitation "two-system end-interfaces", even though applicant stated the change in terminology does not add any new matter to the application, as the language was clearly supported by the original specification and drawings. Furthermore, the claimed limitations utilized by the applicant appears to differ from the claimed limitations utilized by the applicant in the arguments, such as, in the applicant's argument, applicant recited the claimed limitation as "two-system end-interface compatible with different interface standards," but in the actual amended claim 1, the limitation states "two-system end-interface compatible with different interface format." And also the claimed limitation "a signal converter control chip between an USB interface and a storage media card interface" does not appears to be claimed in the independent claim 1.

Claim Objections

3. Claims 1 and 16 are objected to because of the following informalities:

in claim 1, line 3, "a storage media interface compatible with to a plurality of storage media cards" should be replace with -a storage media interface compatible with to a plurality of storage media cards; and-, and

in claim 16, line 4, there is an extra "t" at the end of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-4, 7-8, 12, 16-17 and 20-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claim 1, it appears unclear to the examiner where in the Specification or the Drawings the claimed limitation "a storage media interface" and "storage media card interface" are supported, as applicant has not pointed out where the amendments in the claim 1 are supported, nor does there appear to be a written description of the claimed limitations "two-system end-interfaces," "a storage media interface" and "storage media card interface" in the application as filed. Further more, it appears unclear where "a storage media interface, connected to a plurality of storage media cards" is supported in the Specification or the Drawings, more specifically, the claimed limitation appears to reflect wherein the connection is a simultaneous connection of the plurality of storage media cards to the storage media interface, and examiner is unable to find such support in the Specification or the Drawings. Examiner will assume "a storage media interface compatible to a plurality of storage media cards" for the current examination.

Claims 2-4, 7-8, 12, 16-17 and 20-21 are also rejected at least due to direct or indirect dependency on the rejected independent claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4, 7-8, 12, 16-17 and 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 1 recites the limitation "the storage media card interface" in claim 1, lines 4-6. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "wherein the storage media " in claim 2, line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "wherein the storage medium " in claim 3, line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "wherein the system-end interfaces" in claim 4, line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "one storage medium " in claim 7, line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "storage medium" in claim 16, line 4. There is insufficient antecedent basis for this limitation in the claim.

Application/Control Number: 10/777,733

Art Unit: 2181

Claim 17 recites the limitation "one storage medium " in claim 17, line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "one storage medium " in claim 17, line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "wherein a signal converter control chip" and "the storage media card interface" in claim 20, lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 2 contains the trademark/trade name "CF"; and

Claim 4 contains the trademark/trade name "PCI Express"; and

Claim 12 contains the trademark/trade name "Smart Media (SM)," "xD," "Secure Digital (SD)," "Multi-Media Card (MMC)" and "Memory Stick (MS)." Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a type of interconnection and various types of memory cards and, accordingly, the identification/description is indefinite.

8. As per claim 1, it appears unclear as to which "storage media card interface" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a storage media card interface". Examine will assume "storage media interface" for the current examination.

As per claim 2, it appears unclear as to which "storage media" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a storage media". Examine will assume "the plurality of storage media" for the current examination.

As per claim 3, it appears unclear as to which "storage medium" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a storage medium". Examine will assume "the plurality of storage media" for the current examination.

As per claim 4, it appears unclear as to which "system-end interfaces" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a system-end interfaces". Examine will assume "two system-end interfaces" for the current examination.

As per claims 7 and 17, it appears unclear as to which "storage medium" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a storage medium". Examine will assume "one of the plurality of storage media" for the current examination.

As per claim 16, it appears unclear as to which "storage medium" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a storage medium". Examine will assume "one of the plurality of storage media" for the current examination.

As per claim 12, it appears unclear as to which "small storage media" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a small storage media". Examine will assume "the plurality of storage media include Smart Media (SM), Secure Digital (SD), Multi-Media Cards (MMC) and Memory Stick (MS)" for the current examination.

As per claim 20, it appears unclear as to which "signal converter control chip" the applicant is referring as there appears to have no prior recitation of the claimed limitation "a signal converter control chip".

As per claim 8, claim 8 is rejected at least due to dependency on the rejected independent claim 1.

9. As per claims 20-21, it appears unclear regarding the dependency of claims 20-21 as claim 10, which dependent claims 20-21 are dependent upon, is canceled.

Examiner will assume that claims 20-21 are dependent on independent claim 1 and "the storage media interface" for the current examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-2, 7, 12 and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Mowery et al. (US Patent 6,984,152).

11. As per claim 1, Mowery teaches a multiple format interface adapter for small storage comprising:

a storage media interface (passive adapter 310 of Fig. 3) compatible with to a plurality of storage media cards (Fig. 3, ref. 315) (col. 5, ll. 43-46), wherein the passive adapter is compatible with media cards such as Smart Media, SD/MMC and Memory Stick; and

two-system end-interface (passive adapter system 330 of Fig. 3) compatible with different interface format (col. 2, ll. 44-62; wherein the interface format comprises the 16-bit card, the CardBus card or the passive adapter), coupled to the storage media interface (Fig. 3, ref. 310), wherein one of the system-end interface (e.g. interface format compatible with passive adapter) cooperates with the storage media interface (Fig. 3, ref. 310) when one storage media card (Fig. 3, ref. 315) inserts and interfaces to

a system end (e.g. notebook) for data transmission (e.g. data is transferred when the user access the media card) (col. 2, ll. 13-15 and col. 2, ll. 55-59).

12. As per claim 2, Mowery teaches the multiple format interface adapter for small storage comprising wherein the plurality of storage media includes a removable CF memory card and a micro drive (col. 1, l. 65 to col. 2, l. 4), wherein the micro drive is a storage with a very small "form factor" or physical size.

13. As per claim 7, Mowery teaches the multiple format interface adapter for small storage comprising wherein the two-system end-interfaces include a power terminal that transmits an operating voltage issued from the system (e.g. host) when one of the plurality of storage media (i.e. storage media card) inserts (Fig. 6B; Fig. 8 and col. 5, l. 32 to col. 6, l. 20), as the power for operation from the host will not apply if there is no storage media card inserted.

14. As per claim 12, Mowery teaches the multiple format interface adapter for small storage comprising wherein the plurality of storage media include Smart Media (SM), Secure Digital (SD), Multi-Media Cards (MMC) and Memory Stick (MS) (col. 2, ll. 1-3).

15. As per claim 16, Mowery teaches the multiple format interface adapter for small storage further comprising a card insertion detect terminal (Fig. 16, ref. 1001, 1002,

1003, 1604) that detect the insertion of one of the plurality of storage media (i.e. storage media card) (Fig. 16 and col. 8, ll. 41-67).

16. As per claim 17, Mowery teaches the multiple format interface adapter for small storage comprising wherein the two-system-end interfaces include a power terminal that transmits an operating voltage issued from the system end (e.g. host) when one of the plurality of storage media (i.e. storage media card) inserts (Fig. 6B; Fig. 8 and col. 5, l. 32 to col. 6, l. 20), as the power for operation from the host will not apply if there is no storage media card inserted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mowery et al. (US Patent 6,984,152) in view of Jones et al. (US Pub 2003/0084220 A1)

Mowery teaches all the limitations of claim 1 as discussed above.

Mowery does not teach the multiple format interface adapter for small storage comprising:

wherein the plurality of storage media includes a fixed small hard drive; and

wherein the storage media interface further includes a plurality of address terminals, data transmission terminals and control terminals.

Jones teaches an interface adaptor card reader comprising:

a flash media including a MicroDrive (Claim 5), wherein the MicroDrive is a fix small hard drive; and

a plurality of connector pins utilized for transferring of address signal, data signal and control signal ([0082]).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Jones' MicroDrive, address signal, data signal and control signal into Mowery's multiple format interface adapter. The resulting combination of the references teaches the multiple format interface adapter for small storage comprising:

the plurality of storage media including the MicroDrive; and
the storage media interface including pins for transferring of address signals, data signals and control signals.

Therefore, it would have been obvious to combine Jones with Mowery for the benefit of increasing the number of the different types of memory card that can be read by the multiple format interface adapter properly and also implementing an active adapter which can be used interchangeably connecting a different memory/memories and a device (Jones, [0023]).

18. Claims 4 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mowery et al. (US Patent 6,984,152) in view of "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs".

Mowery teaches all the limitations of claim 1 as discussed above, wherein Mowery teaches the multiple format interface adapter for small storage comprising wherein a signal converter control chip is further provided to connect between an PCMCIA interface and the storage media cards (Fig. 4 and col. 3, ll. 3-16), wherein the signal converter must resides on the PCMCIA card (Fig. 4, ref. 400) and is implemented by a number of different components such as ICs, resistor and voltage regulators in order to properly transfer data between the storage media cards and the computer system.

Mowery does not teach the multiple format interface adapter for small storage comprising:

wherein the two system-end interface include a PCI Express interface and a USB interface; and

a signal converter control chip to further provide to connect between an USB standard interface and the storage media interface.

"PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teaches the new development of the codename NEWCARD, which supporting the USB 2.0 and PCI Express I/O technology (page1), wherein the interface of the NEWCARD, also known as Express Card, would have a double-configuration interface conforming to the USB 2.0 and PCI Express I/O technology.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs' support for the USB 2.0 and PCI Express I/O technology into Mowery's system end interface. The resulting combination of the references teaches the multiple format interface adapter for small storage comprising

wherein the system-end interface include the interface conforming to the PCI Express standard and the interface conforming to the USB standard; and

the signal converter connected between the PCMCIA card (i.e. storage media interface) and the interface conforming to the USB standard.

Therefore, it would have been obvious to combine PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs with Mowery for the benefit of reducing size and cost of the adapter while increasing the data transferring speed (PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs, page 1).

19. Claims 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mowery et al. (US Patent 6,984,152) and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs," and further in view of Jones et al. (US Pub 2003/0084220 A1).

Mowery and PCMCIA Announcement Development for New Expansion

Technology for Mobile and Desktop PCs teach all the limitations of claim 20 as discussed above.

Mowery and PCMCIA Announcement Development for New Expansion

Technology for Mobile and Desktop PCs does not teach the multiple format interface adapter for small storage comprising wherein the signal converter control chip is an IDE converter control chip to convert storage medium-compatible USB signals to system-compatible IDE signals.

Jones teaches an interface adaptor card reader comprising:

an active adapter (Fig. 3B, ref. 40) interfacing between a plurality of memory cards (Fig. 3B, ref. 41, 43, 45, 47) and the IDE (Fig. 3B, ref. 51) as data is read from the plurality of memory cards and outputted to the IDE ([0050]).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Jones' active interface to the IDE into Mowery and PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs' signal converter chip. The resulting combination of the references teaches the multiple format interface adapter for small storage comprising wherein the signal converter control chip provides proper transfer of data from the USB signal to the IDE signal adaptively converting the USB signal to the IDE signal.

Therefore, it would have been obvious to combine Jones with Mowery and PCMCIA Announcement Development for New Expansion Technology for Mobile and

Art Unit: 2181

Desktop PCs for the benefit of implementing an active adapter which can be used interchangeably connecting a different memory/memories and a device (Jones, [0023]).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

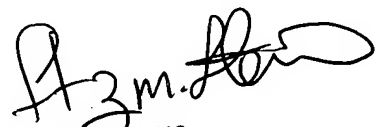
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz M. Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2181

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.K.L.
08/18/2006


FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100